



# TRANSMITTAL FORM

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		Application Number	10/536,888
		Filing Date	May 31, 2005
		First Named Inventor	Thomas R. Young
		Group Art Unit	1638
		Examiner Name	Russell P. Kallis
Total Number of Pages in This Submission		Attorney Docket Number	63-000210US

## ENCLOSURES (check all that apply)

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<input type="checkbox"/> Fee Attached	<input checked="" type="checkbox"/> Cited References	<input type="checkbox"/> Request for Continued Examination (RCE)
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## SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm or Individual name	Edward J. DesJardins, Ph.D., Reg. No. 51,162, Quine Intellectual Property Law Group, P.C.
Signature	
Date	July 9, 2007

## CERTIFICATE OF MAILING

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QUINE INTELLECTUAL PROPERTY LAW GROUP, P.C.

By Kimberly Cheung  
Kimberly Cheung

Attorney Docket No. 63-000210US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Thomas R. Young, et al.

Application No.: 10/536,888

Filed: May 31, 2005

For: TRANSGENIC PINEAPPLE PLANTS  
WITH MODIFIED CAROTENOID  
LEVELS AND METHODS OF THEIR  
PRODUCTION

Confirmation No. 1367

Examiner: Russell P. Kallis

Art Unit: 1638

INFORMATION DISCLOSURE  
STATEMENT UNDER 37 CFR § 1.97 and  
§ 1.98

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

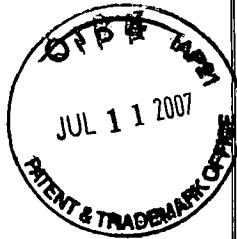
Sir:

The references cited on attached form PTO-1449 are being called to the attention of the Examiner. Copies of the references are enclosed. Copies of the cited US Patent applications and US Publications have not been enclosed because they are no longer required by the office for submission. It is respectfully requested that the cited information be expressly considered during the prosecution of this application, and the references be made of record therein and appear among the "references cited" on any patent to issue therefrom.

As provided for by 37 CFR 1.97(g) and (h), no inference should be made that the information and references cited are prior art merely because they are in this statement and no

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Thomas R. Young, et al.  
Application No.: 10/536,888  
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representation is being made that a search has been conducted or that this statement encompasses all the possible relevant information.

Applicant believes that no fee is required for submission of this statement, since it is being submitted prior to the first Office Action on the merits per 37 CFR 1.97(b)(3). However, if a fee is required, the Commissioner is authorized to deduct such fee from the undersigned's Deposit Account No. 50-0893. Please deduct any additional fees from, or credit any overpayment to, the above-noted Deposit Account.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "E.J. DesJardins".

Edward J. DesJardins, Ph.D.  
Reg. No. 51,162

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Substitute for form 1449A-B/PTO

Complete if Known

INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>	Application Number	10/536,888
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	Attorney Docket Number	63-000210US
	Date Submitted	July 9, 2007

## U.S. PATENT DOCUMENTS

Examiner Initials	Cite No.	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, lines, Where Relevant Passages or Relevant Figures Appeal
		Number	Kind Code (if known)			
1	2002/0102631	A1		Chnningham, Jr. et al.	08-01-2002	
2	2002/0092039	A1		Shewmaker	07-11-2002	
3	5,429,939			Misawa et al.	07-04-1995	
4	5,530,188			Ausich et al.	06-25-1996	
5	5,530,189			Ausich et al.	06-25-1996	
6	5,589,581			Misawa et al.	12-31-1996	
7	5,618,988			Hauptmann et al.	04-08-1997	
8	5,656,472			Ausich et al.	08-12-1997	
9	5,684,238			Ausich et al.	11-04-1997	
10	5,744,341			Cunningham, Jr. et al.	04-28-1998	
11	5,750,865			Bird et al.	05-12-1998	
12	5,792,903			Hirschberg et al.	08-11-1998	
13	6,087,563			DellaPenna et al.	07-11-2000	
14	6,214,575	B1		Yano et al.	04-10-2001	
15	6,239,331	B1		Drake et al.	05-29-2001	
16	6,252,141	B1		Hirschberg et al.	06-26-2001	
17	6,429,356	B1		Shewmaker	08-06-2002	

## FOREIGN PATENT DOCUMENTS

Examiner Initials	Cite No.	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T
		Office	Number	Kind Code (if known)				
18	EP	0 393 690		A1	Kirin Beer Kabushiki Kaisha	10-24-1990		
19	EP	0 769 551		A1	Kirin Beer Kabushiki Kaisha	04-23-1997		
20	WO	1991/013078		A1	Amoco Corporation	09-05-1991		

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	21	WO	1995/018220	A1	Kirin Beer Kabushiki Kaisha & Marine Biotechnology Institute Co., LTD	07-06-1995		
	22	WO	1996/006172	A1	Kirin Beer Kabushiki Kaisha	02-29-1996		
	23	WO	1998/036637	A1	DNA Plant Technology Corporation	08-27-1998		
	24	WO	1999/055889	A2	E.I. Du Pont de Nemours and Company	11-04-1999		
	25	WO	1999/058644	A1	University of Hawaii	11-18-1999		
	26	WO	2000/053768	A1	Greenovation Pflanzenbiotechnologie GMBH	09-14-2000		
	27	WO	2001/036597	A1	Mendel Biotechnology, Inc.	05-25-2001		
	28	WO	2001/044276	A2	BASF Plant Science GMBH	06-21-2001		
	29	WO	2001/088169	A2	Monsanto Technology, LLC	11-22-2001		
	30	WO	2002/018617	A2	E.I. Du Pont de Nemours and Company	03-07-2002		
	31	WO	2002/020815	A2	E.I. Du Pont de Nemours and Company	03-14-2002		
	32	WO	2004/063359	A2	Basf Aktiengesellschaft	07-29-2004		

## OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T
	33	AITKEN ET AL. (1995) "A cDNA Encoding Geranylgeranyl Pyrophosphate Synthase from White Lupin." <i>Plant Physiol.</i> , 108: 837-838.	

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	34	ARACRI ET AL. (1994) "Sequence of the Phytoene Desaturase Locus of Tomato." <i>Plant Physiol.</i> , 106: 789.	
	35	ARMSTRONG (1994) "Eubacteria show their true colors: genetics of carotenoid pigment biosynthesis from microbes to plants" <i>Journal of Bacteriology</i> , 176(16): 4795-4802.	
	36	ARMSTRONG ET AL. (1989) "Nucleotide sequence, organization, and nature of the protein products of the carotenoid biosynthesis gene cluster of <i>Rhodobacter capsulatus</i> ," <i>Mol. Gen. Genet.</i> , 216(2-3):254-268.	
	37	ARMSTRONG ET AL. (1990) "Conserved enzymes mediate the early reactions of carotenoid biosynthesis in nonphotosynthetic and photosynthetic prokaryotes." <i>Proceeding of the National Academy of Sciences, USA</i> , 87: 9975-9979.	
	38	BADILLO ET AL. (1995) "Structure of a functional geranylgeranyl pyrophosphate synthase gene from <i>Capsicum annuum</i> ," <i>Plant Mol. Biol.</i> , 27(2):425-428.	
	39	BARTLEY ET AL. (1991) "Molecular cloning and expression in photosynthetic bacteria of a soybean cDNA coding for phytoene desaturase, an enzyme of the carotenoid biosynthesis pathway." <i>Proceeding of the National Academy of Sciences, USA</i> , 88(15): 6532-6536.	
	40	BARTLEY ET AL. (1992) "A tomato gene expressed during fruit ripening encodes an enzyme of the carotenoid biosynthesis pathway," <i>J. Biol. Chem.</i> , 267(8):5036-5039	
	41	BARTLEY ET AL. (1993) "cDNA cloning, expression during development, and genome mapping of PSY2, a second tomato gene encoding phytoene synthase," <i>J. Biol. Chem.</i> , 268 (34):25718-25721.	
	42	BIRD ET AL. (1991) "Using antisense RNA to study gene function: inhibition of carotenoid biosynthesis in transgenic tomatoes," <i>Bio/Technology</i> 9(7):635-639	
	43	BRAMLEY ET AL. (1992) "Biochemical characterization of transgenic tomato plants in which carotenoid synthesis has been inhibited through the expression of antisense RNA to pTOM5," <i>Plant Journal</i> , 2(3):343-349.	
	44	BREITENBACH ET AL. (1999) "Catalytic properties of an expressed and purified higher plant type zeta-carotene desaturase from <i>Capsicum annuum</i> ," <i>Eur. J. Biochem.</i> , 265(1):376-383.	
	45	BRITTON. "Biosynthesis of carotenoids," p. 133-182, in T. W. Goodwin (Ed.), <i>Plant Pigments</i> , Academic Press, Inc. (1988).	
	46	CUNNINGHAM ET AL. (1996) "Functional analysis of the beta and epsilon lycopene cyclase enzymes of <i>Arabidopsis</i> reveals a mechanism for control of cyclic carotenoid formation," <i>Plant Cell</i> , 8(9):1613-1626.	
	47	CUNNINGHAM ET AL. (2001) "One ring or two? Determination of ring number in carotenoids by lycopene varepsilon-cyclases," <i>Proc. Natl. Acad. Sci. U.S.A.</i> , 98(5):2905-2910.	

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	48	FIROOZABADY AND MOY (2004) "Regeneration of pineapple plants via somatic embryogenesis and organogenesis," <i>In Vitro Cellular and Developmental Biology – Plant</i> , 40(1):67-74.	
	49	FRASER ET AL. (2002) "Evaluation of transgenic tomato plants expressing an additional phytoene synthase in a fruit-specific manner." <i>Proceeding of the National Academy of Sciences, USA</i> , 99(2): 1092-1097.	
	50	FRAY AND GRIERSON. (1993) "Identification and genetic analysis of normal and mutant phytoene synthase genes of tomato by sequencing, complementation and co-suppression," <i>Plant Mol. Biol.</i> , 22(4):589-602.	
	51	GIULIANO ET AL. (1993) "Regulation of carotenoid biosynthesis during tomato development," <i>Plant Cell</i> , 5(4):379-387.	
	52	HABLE ET AL. (1995) "Maize phytoene desaturase maps near the viviparous5 locus," <i>Plant Physiol.</i> , 108(3):1329-1330.	
	53	HAHN ET AL. (1996) "Open reading frame 176 in the photosynthesis gene cluster of <i>Rhodobacter capsulatus</i> encodes idi, a gene for isopentenyl diphosphate isomerase," <i>J. Bacteriol.</i> 178(3):619-624.	
	54	HARKER ET AL. (1997) "Biosynthesis of ketocarotenoids in transgenic cyanobacteria expressing the algal gene for beta-C-4-oxygenase, crtO," <i>FEBS Lett.</i> , 404(2-3):129-134.	
	55	HOSHINO ET AL. (1993) "Molecular cloning and sequence analysis of the crtB gene of <i>Thermus thermophilus</i> HB27, an extreme thermophile producing carotenoid pigments," <i>Appl. Environ. Microbiol.</i> 59(9):3150-3153.	
	56	HUGUENEY ET AL. (1995) "Metabolism of cyclic carotenoids: a model for the alteration of this biosynthetic pathway in <i>Capsicum annuum</i> chromoplasts," <i>The Plant Journal</i> , 8(3):417-424.	
	57	HUNDLE ET AL. (1993) "In vitro expression and activity of lycopene cyclase and beta-carotene hydroxylase from <i>Erwinia herbicola</i> ," <i>FEBS Lett.</i> , 315(3):329-334.	
	58	KARVOUNI ET AL. (1995) "Isolation and characterisation of a melon cDNA clone encoding phytoene synthase," <i>Plant Mol. Bio.</i> , 27(6):1153-1162.	
	59	KIM ET AL. (2001) "Isolation and characterization of cDNAs encoding beta-carotene hydroxylase in <i>Citrus</i> ," <i>Plant Sci.</i> , 161(5):1005-1010.	
	60	LI ET AL. (1996) "Cloning and characterization of a maize cDNA encoding phytoene desaturase, an enzyme of the carotenoid biosynthetic pathway," <i>Plant Mol. Biol.</i> , 30(2):269-279.	
	61	MANGELS ET AL. (1993) "Carotenoid content of fruits and vegetables: an evaluation of analytic data," <i>J. Am. Diet. Assoc.</i> , 93(3):284-296.	

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Page 4 of 5  
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	62	MISAWA ET AL. (1990) "Elucidation of the <i>Erwinia uredovora</i> Carotenoid Biosynthetic Pathway of Functional Analysis of Gene Products Expressed in <i>Escherichia coli</i> ." <i>Journal of Bacteriology</i> , 172(12): 6704-6712.	
	63	MISAWA ET AL. (1995) "Structure and Functional Analysis of a Marine Bacterial Carotenoid Biosynthesis Gene Cluster and Astaxanthin Biosynthetic Pathway Proposed at the Gene Level." <i>Journal of Bacteriology</i> , 177(22): 6575-6584.	
	64	PECKER ET AL. (1992) "A single polypeptide catalyzing the conversion of phytoene to zeta-carotene is transcriptionally regulated during tomato fruit ripening." <i>Proceeding of the National Academy of Sciences, USA</i> , 89(11): 4962-4966.	
	65	PFANDER (1992) "Carotenoids: an overview," <i>Meth. Enzymol.</i> , 213:3-13.	
	66	RAY ET AL. (1987) "Sequence of pTOM5, a ripening related cDNA from tomato," <i>Nucleic Acids Res.</i> , 15(24):10587	
	67	RAY ET AL. (1992) "Cloning and characterization of a gene involved in phytoene synthesis from tomato," <i>Plant Mol. Biol.</i> , 19(3):401-404.	
	68	ROMER ET AL. (1993) "Expression of the genes encoding the early carotenoid biosynthetic enzymes in <i>Capsicum annuum</i> ," <i>Biochem. Biophys. Res. Commun.</i> , 196 (3):1414-1421.	
	69	RONEN ET AL. (2000) "An alternative pathway to beta-carotene formation in plant chromoplasts discovered by map-based cloning of beta and old-gold color mutations in tomato." <i>Proceeding of the National Academy of Sciences, USA</i> , 97(20): 11102-11107.	
	70	SCOLNIK AND BARTELY (1994) "Nucleotide Sequences of an <i>Arabidopsis</i> cDNA for Geranylgeranyl Pyrophosphate Synthase." <i>Plant Physiol.</i> , 104: 1469-1470.	
	71	THEOLOGIS ET AL. (2000) "Sequence and analysis of chromosome 1 of the plant <i>Arabidopsis thaliana</i> ," <i>Nature</i> , 408(6814):816-820.	
	72	ZHU ET AL. (1997) "Cloning and functional expression of a novel geranylgeranyl pyrophosphate synthase gene from <i>Arabidopsis thaliana</i> in <i>Escherichia coli</i> ," <i>Plant Cell Physiol.</i> , 38(3):357-361.	

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